

Listing of Claims

Claims 1-11 (Cancelled)

12. (Previously Amended) A method for depositing a phosphor pattern on an article using a direct-write tool, comprising the steps of providing a particulate suspension of phosphor particles, wherein said particles are substantially spherical and have a weight average particle size of from about 0.1 μm to about 20 μm and depositing said particulate suspension on said article using a direct-write tool that is controllable over an x-y grid.

13. (Original) A method as recited in Claim 12, wherein said average particle size is from about 0.3 μm to about 10 μm .

14. (Original) A method as recited in Claim 12, wherein said particles comprise metal oxide phosphor particles.

15. (Original) A method as recited in Claim 12, wherein said particles comprise metal sulfide phosphor particles.

16. (Original) A method as recited in Claim 12, wherein said article is a panel for a flat panel display.

17. (Original) A method as recited in Claim 12, wherein said phosphor particles have an apparent density of not greater than about 20 percent of the theoretical density of the phosphor compound.

18. (Original) A method as recited in Claim 12, wherein said phosphor particles comprise hollow particles.

19. (Original) A method as recited in Claim 12, wherein said direct-write tool is an automated syringe.

20. (Original) A method as recited in Claim 12, wherein said direct-write tool is an ink-jet.

Claims 21-23 (Cancelled)

24. (Previously Amended) A method for forming a flat panel display, comprising the steps of:

- a) providing a flat panel display screen;
- b) depositing at least first phosphor particles on said display screen, wherein said step of depositing comprises using a direct-write tool controllable over an x-y grid to deposit a liquid suspension comprising said first phosphor particles in

predetermined pixel regions wherein said first phosphor particles have an average size of not greater than about 20 μm and a substantially spherical morphology.

25. (Previously Presented) A method as recited in Claim 12, wherein said phosphor particles have a size distribution wherein at least about 80 weight percent of said phosphor particles are not larger than twice said average particle size.

26. (Previously Presented) A method as recited in Claim 12, wherein said phosphor particles have a size distribution wherein at least about 90 weight percent of said phosphor particles are not larger than twice said average particle size.

27. (Previously Presented) A method as recited in Claim 12, wherein said particulate suspension comprises a water-based liquid vehicle.

28. (Previously Presented) A method as recited in Claim 12, wherein said particulate suspension has a viscosity of not greater than about 30 centipoise.

29. (Previously Presented) A method as recited in Claim 12, wherein said phosphor pattern comprises predetermined pixel regions.

30. (Previously Presented) A method as recited in Claim 24, wherein said flat panel display is a field emission display.

31. (Previously Presented) A method as recited in Claim 24, wherein said flat panel display is a plasma display panel.

32. (Previously Presented) A method as recited in Claim 24, wherein said phosphor particles have an average size of from about 0.3 μm to about 10 μm .

33. (Previously Presented) A method as recited in Claim 24, further comprising the step of depositing at least second phosphor particles on said display screen, wherein said step of depositing comprises using said direct-write tool controllable over an x-y grid to deposit said second phosphor particles in said predetermined pixel regions wherein said second phosphor particles have an average size of not greater than about 20 μm and a substantially spherical morphology and have a composition different than said first phosphor particles.

34. (Previously Presented) A method as recited in Claim 24, wherein said direct-write tool is an ink-jet device.

35. (Previously Presented) A method as recited in Claim 24, wherein said phosphor particles comprise metal oxide phosphor particles.

36. (Previously Presented) A method as recited in Claim 24, wherein said phosphor particles comprise metal sulfide phosphor particles.

37. (Currently Amended) A method as recited in Claim 24 ~~42~~, wherein said phosphor particles have a size distribution wherein at least about 80 weight percent of said phosphor particles are not larger than twice said average particle size.

38. (Currently Amended) A method as recited in Claim 24 ~~42~~, wherein said phosphor particles have a size distribution wherein at least about 90 weight percent of said phosphor particles are not larger than twice said average particle size.